6JC8

Medium-Mu Triode—Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater Characteristics and Ratings *(Design-Maximum Values)*:

Voltage (AC or DC)	6.3[a]	6.3 ± 0.6	volts
Current	0.450 ± 0.030	0.450[b]	amp
Warm-up time (Average)	11	-	sec
Peak heater-cathode voltage:			
Heater negative with respect to cathode	200 max.		volts
Heater positive with respect to cathode	200[c] max.		volts

Direct Interelectrode Capacitances:

	Without External Shield	*With External Shield*[d]	
Triode Unit:			
Grid to plate	1.3	1.2	μμf
Grid to cathode and heater	2.8	3.2	μμf
Plate to cathode and heater	0.44	0.9	μμf
Pentode Unit:			
Grid No.1 to plate	0.038 max.	0.018 max.	μμf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater	4.8	5.0	μμf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater	0.9	1.6.	μμf
Pentode grid No.1 to triode plate	0.05 max.	0.036 max.	μμf
Pentode plate to triode plate	0.075 max.	0.012 max.	μμf
Heater to cathode	6.5	6.5[e]	μμf

Characteristics, Class A_1 Amplifier:

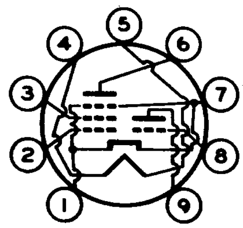
	Triode Unit	*Pentode Unit*		
Plate Voltage	125	100	125	volts
Grid-No.2 Voltage	-	70	125	volts
Grid-No.1 Voltage	-1	0	-1	volt
Amplification Factor	40	-	-	
Plate Resistance (Approx.)	6000	-	300000	ohms
Transconductance	6500	5700	5500	μmhos

	Triode Unit	Pentode Unit	
Plate Current.	12	9	ma
Grid-No.2 Current.	–	2.2	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20.	-7	6.5	volts

Mechanical:

Operating Position . . . . .Any
Type of Cathode. . . . . .Coated Unipotential
Maximum Overall Length . . . . 2-3/16"
Maximum Seated Length. . . . . 1-15/16"
Length, Base Seat to Bulb Top (Excluding tip) . . 1-9/16" ± 3/32"
Diameter . . . . 0.750" to 0.875"
Dimensional Outline. . . . . .See *General Section*
Bulb T6-1/2
Base . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW 9PA

Pin 1 - Pentode Grid No.3, Cathode, Internal Shield
Pin 2 - Pentode Grid No.1
Pin 3 - Pentode Grid No.2
Pin 4 - Heater



Pin 5 - Heater
Pin 6 - Pentode Plate
Pin 7 - Pentode Grid No.3, Cathode, Internal Shield
Pin 8 - Triode Grid
Pin 9 - Triode Plate

AMPLIFIER — Class A_1

Maximum Ratings, ***Design-Maximum Values:***

	Triode Unit	Pentode Unit	
PLATE VOLTAGE.	275 max.	275 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	–	275 max.	volts
GRID-No.2 VOLTAGE.	–	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive-bias value. . . .	0 max.	0 max.	volts
PLATE DISSIPATION.	1.7 max.	2.3 max.	watts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 137.5 volts. . . .	–	0.45 max.	watt
For grid-No.2 voltages between 137.5 and 275 volts.	–	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	

Maximum Circuit Values:

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation .	–	0.1 max.	megohm
For cathode-bias operation.	–	0.5 max.	megohm

[a] At heater amperes = 0.450.
[b] At heater volts = 6.3.
[c] The dc component must not exceed 100 volts.
[d] With external shield JEDEC No.315 connected to pin 3 except as noted.
[e] With external shield JEDEC No.315 connected to pin 6.